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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,640	12/14/2000	Eric J. Panken	P-7443	8153

27581 7590 07/29/2003

MEDTRONIC, INC.  
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EXAMINER
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PAIK, SANG YEOP

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 07/29/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/736,640

Applicant(s)

PANKEN ET AL.

Examiner

Sang Y Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 May 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Bennett et al (US 5,331,966). Bennett et al discloses the claimed circuit having a means for detecting atrial depolarization signals by the subcutaneous electrodes provided on a hermetically sealed case, a means for pacing having a pacing lead into the right ventricle of a heart. Bennett further shows that the lead can be made from unipolar or bipolar leads.

2. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Duffin (US 6,230,059). See Figure 2, column 7, lines 5-49.

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***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al (US 5,331,966) in view of Rapach et al (US 4,907,593) or Pless et al (US 5,489,293).

Bennett et al discloses all the structure including receiving ECG data generated from the SEA and the external lead. Bennett et al, however, does not show having a digital to analog converter (DAC).

Rapach et al shows having a DAC for converting the digital signal to an analog signal to set the analog amplitude of the pulse output delivered to the lead in the heart. Pless et al also shows having a DAC in a ventricular pace unit to provide the regulated voltages to the lead in the heart.

In view of Rapach et al or Pless et al, it would have been obvious to one of ordinary skill in the art to adapt Bennett et al with the DAC unit to provide the analog signals to the lead in the art to trigger the desired stimulation.

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6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nigram et al (WO 00/61225) in view of Bennett et al (US 5,331,966) or Duffin (US 6,230,059).

Nigram et al shows the method of starting a PR cross check, discounting a p-wave, triggering a PVAPR interval when R-wave is detected, the PVAPR is used to blank p-waves and preventing PMT, and the VA interval extended by an AV interval is shown by the delay signal in Figure 2 with a p-wave being sensed after such interval. Nigram et al however does not show a pair of electrodes as the signal detector.

Bennett et al or Duffin shows that it is well known in the art to provide electrodes as the detector means to detect the ventricular signals in the heart. In view of Bennett et al or Duffin, it would have been obvious to one of ordinary skill in the art to adapt Nigram et al with the electrodes as the means to detect the ventricular signals since such electrode means provides an effective and convenient means to electrically detect and measure the conditions of the heart.

#### ***Response to Arguments***

7. Applicant's arguments filed 5/12/03 have been fully considered but they are not persuasive.

The applicant argues that the applied art, Bennett et al and Duffin do not show the means for pacing a ventricle synchronous with the detected atrial depolarization signals. Both references clearly teach that the detected signals are used for therapies including pacing, cardioversion and defibrillation therapies. In view of such a clear teaching, the applicant's argument is not deemed persuasive.

With respect to Rapach et al and Pless et al, it is noted that these prior art is used to teach the claimed DAC which is used to deliver the analog signals in the pacemakers which are in the

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same field of endeavor which is in the field of operating pacemakers. While Rapach et al or Pless et al may use different means, it does not teach away or prevent Bennett et al from adapting the DAC converter to send analog signals.

With respect to claim 12-14, the applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y Paik whose telephone number is 703-308-1147. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa Walberg can be reached on 703-308-1327. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

S.P.C.

Sang Y Paik  
Primary Examiner  
Art Unit 3742

syp  
July 27, 2003